

```

1 (require spd/tags)
2
3 (@htdd Trip)
4 (define-struct trip (origin destination mot duration))
5 ;; Trip is (make-trip String String String Natural)
6 ;; interp. a trip with origin, destination, mode of transport,
7 ;;           and duration in days
8
9 (define T1 (make-trip "Vancouver" "Cancun" "Flight" 10))
10 (define T2 (make-trip "Calgary" "Ottawa" "Car" 14))
11 (define T3 (make-trip "Montreal" "New York" "Flight" 5))
12
13 (@dd-template-rules compound) ;4 fields
14
15
16 (define (fn-for-trip t)
17   (... (trip-origin t) ;String
18        (trip-destination t) ;String
19        (trip-mot t) ;String
20        (trip-duration t))) ;Natural
21
22
23 (@htdf longer-trip)
24 (@signature Trip Trip -> Trip)
25 ;; produce trip with longer duration, if durations are equal produce 2nd trip
26 (check-expect (longer-trip T2 T3) T2)
27 (check-expect (longer-trip T3 T1) T1)
28 (check-expect (longer-trip T3 (make-trip "Houston" "Dallas" "Car" 5))
29               (make-trip "Houston" "Dallas" "Car" 5))
30
31 ;(define (longer-trip t1 t2) T1) ; stub
32
33 (@template-origin Trip)
34
35 (@template
36 (define (fn-for-trip t1 t2)
37   (... (trip-origin t1)
38        (trip-destination t1)
39        (trip-mot t1)
40        (trip-duration t1)
41        (trip-origin t2)
42        (trip-destination t2)
43        (trip-mot t2)
44        (trip-duration t2))))
45
46 (define (longer-trip t1 t2)
47   (if (> (trip-duration t1) (trip-duration t2))
48       t1
49       t2))
50
51 #|
52 [A] There is a question expression on line 47.
53
54 [B] The true answer in the function body of longer-trip is a call to >.
55
56 [C] The function body spans lines 36 to 44.
57
58 [D] Line 47 contains a call to a primitive function.

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59 |
60 | [E] Line 4 is a type comment.
61 |
62 | [F] Trip is compound data with 4 atomic distinct fields.
63 |
64 | [G] There is an if statement in the function body of longer-trip.
65 |
66 | [H] Line 40 contains a call to a selector.
67 |
68 | [I] In the function definition for longer-trip, the arguments
69 | are t1 and t2.
70 | |#